

Sound sampling

Audio on PC part 2 of 2

Making music

Turn your LPs and vinyl into digital music

Create audio samples from a microphone, record or tape with Plus! Analog Recorder

KEY DETAILS

SKILL LEVEL – ADVANCED



NOW YOU CAN...



- ◆ Create your own sound samples using Plus! Analog Recorder
- ◆ Make digital music files from tapes and albums
- ◆ Record instruments or singing

PROJECT TIME

3 HOURS

WHAT YOU'LL NEED

- ◆ A PC running Windows XP
- ◆ Plus! Analog Recorder
- ◆ An audio capture device
- ◆ Fast Audio Converter

ON THE WEB

- ◆ www.microsoft.com/windows/plus/dme/dmehome.asp
- ◆ www.microsoft.com/windows/plus/dme/music.asp

In this series

LAST MONTH
Record sound samples onto PC

THIS MONTH
Use Plus! Analog Recorder

NEXT MONTH
Master Microsoft Works

Missed a previous issue?
It may be still available! Call and
order on +44 (0)870 444 8475

Microsoft Plus! Digital Media Edition is a photo, music and movie enhancement pack (to buy separately for \$19.95) for Windows XP, which comes with Plus! Analog Recorder. This is a superb tool for recording music samples from your old albums and tapes, or from an instrument or microphone. Copyright may be an issue in your territory: in some places you might be able to record audio segments as long as you don't re-sell them. Seek independent legal advice if you want clarification.

Plus! Analog Recorder automatically reduces noise using complex algorithms that search for signatures (such as sudden spikes or constant

hums) in the recorded waveforms. It also looks for unusually high or low frequencies. You can record at 360kbps and save to the Windows Media format as a lossless file, or with varying levels of compression.

One of the great things about lossless compression is that the files are typically about one half the size of an uncompressed file, yet retain the digital fidelity. As most synthesisers support WAV files, however, you'll need to convert the WMA files to use them as samples on the keyboard, using Fast Audio Converter – a free download by Litex Media available from www.wma-mp3-converter.com.

Test the recording

In Analog Recorder, skip past the Welcome screen. As our audio-capture device, we've

IT'S A SUPERB TOOL FOR RECORDING MUSIC SAMPLES FROM YOUR OLD ALBUMS

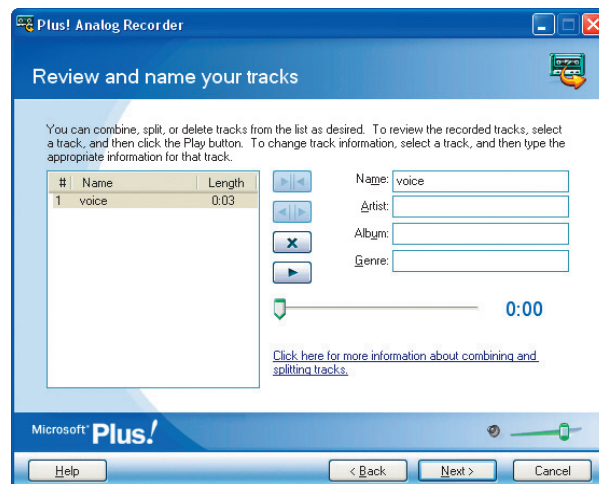
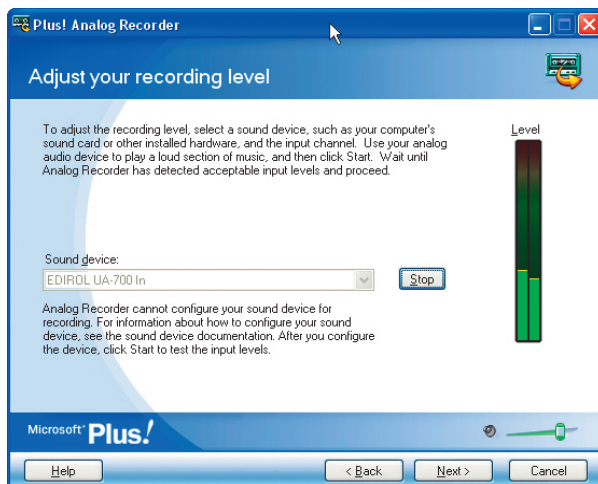
used the EDIROL UA-700 – a high-end audio recording interface that looks like a small mixer board (see www.edirol.com/products/info/ua700.html). At the 'Adjust your recording level' screen, select the EDIROL UA-700 as the input device. You'll see a warning about Analog Recorder not understanding the device. This means Windows XP isn't interpreting the EDIROL as a valid sound card, which is true – it's an audio interface that does more than just play music and record from one audio input.

You'll want to use your PC soundcard as the output

device so you can hear what's recorded, so make sure your PC soundcard is the default playback device. In the System Tray, right-click the Volume icon and select 'Adjust Audio Properties'. Click the Audio tab, and select your soundcard from the Playback pop-up.

Back in Analog Recorder, click Start to test out the recording levels. Assuming you have connected the microphone, MIDI keyboard, or any other audio input and

▼ **Name and save the recorded sample, then complete the Analog Recorder Wizard.**



instrument you want to record, you can just play the sound. If the levels shift into the red area, adjust the Master audio level on the EDIROL device. Click Next.

Record the sample

Click the red Record button and start playing the instrument, singing, or playing the tape or LP from which you want to capture your sound. When you're done, click the Stop button – note that you can click on Reset to re-record. Click Advanced to see options for splitting the sample recording into separate tracks automatically, and click the Play button to hear what you've recorded, then click Next. You might see prompts that inform you about any sound sampling work that Analog Recorder performed on the file in the background. You can then review the file, add track and artist information, delete the sample and start over, and perform some simple editing chores. When you're done, click Next.

At the 'Select settings and save tracks' screen, you can change the filename location and enable digital rights management, which is something you should skip unless you want to add DRM text to the file and notify other people that the recorded sample is copyrighted material. DRM would only

TWO TOP SOUND PROGRAMS

Take your music further with two additional audio-editing tools

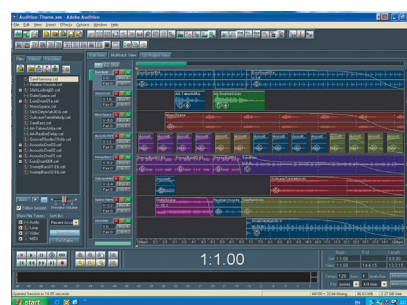
▼ Fruity Loops (£89 – www.fruityloops.com)

The first thing you'll notice about Fruity Loops is the incredibly cool interface, which is mostly black and grey. This enables you to spot all the loops and audio samples easily. Fruity Loops has power under its hood to record and edit samples (you'll need the Studio Edition, which includes the recording functions). The program includes 28 audio effects, can be used as a VST plug-in, and also includes a multi-chord arpeggiator (a feature that breaks down notes and plays them in a rhythmic pattern).



▼ Adobe Audition 1.5 (£209 – www.adobe.co.uk/products/audition)

Adobe Audition started life as the extremely popular Cool Edit Pro from Syntrillium – a sound-editing and effects generator that has now evolved into a fully-fledged recording studio for Windows XP only. In Audition, VST support and a unique streaming audio function enables you to send audio to other sound applications (such as Propellerhead Reason). You might recognise the pop-and-click elimination features – they're the same ones used in Plus! Analog Recorder.



appear in Windows Media Player if you share the sample with other people. Click Next. At the 'Clean your tracks' screen, click on the 'Reduce clicks' and 'Reduce pops' checkboxes to further adjust the quality, then click Play to hear the fixed sample.

Quality and size

Now position the Quality slider. If you drag the slider all the way to the right, the file

size will be huge and the quality will be high. Position it about two-thirds of the way to the left, which provides a good balance of quality and compression. You'll have a chance later on to adjust the quality if you edit the sound.

You can future-proof the sample by using 320kbps, meaning that you can use a newly invented compression algorithm later on. Once you compress the file, however,

you'll never be able to raise the quality higher, so keep that in mind. Click Next and Plus! Analog Recorder saves the file. You can click Finish, or click Back several times to repeat any steps. See the walkthrough on audio conversion below to find out how to prepare the file for editing, and that's it – you've recorded the sample, and you can now use it as a desktop sound. ■



Audio files

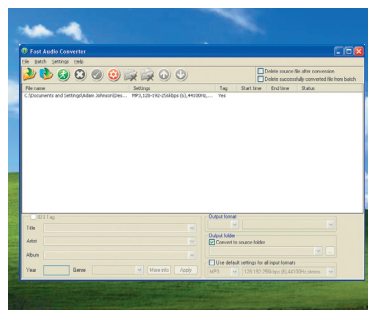
John Brandon explains the WAV and WMA formats

Q I've heard that WMA files are better than WAV files – is this true?

A We've converted our files into WAV format in the step-by-step guide below so they can be used as samples on a keyboard, because most synthesizers support WAV files. As an uncompressed format, WAV files are typically huge, sometimes 10 or 15MB per sample, which makes them hard to transfer over the web. WAV files are gradually being replaced by the Windows Media Audio (WMA) format, which more accurately records and compresses analogue sounds using an audio codec (compression-decompression) algorithm that retains high sound fidelity.

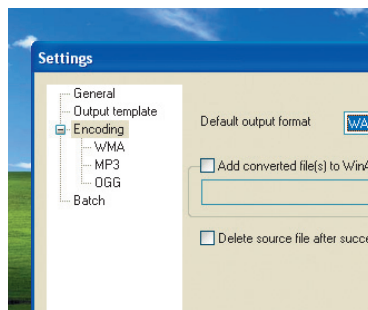
STEP BY STEP CONVERT YOUR SOUND FILES

Use Fast Audio Converter to convert WMA files to WAV files



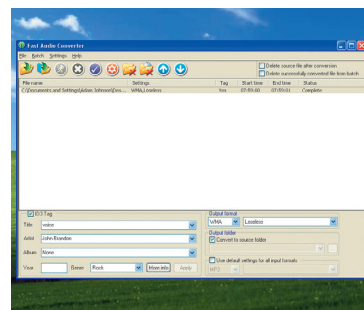
1 START THE CONVERTER

You'll need your files to be in the original Microsoft Windows WAV format for editing, and for when you transport the file to a MIDI keyboard. Start Fast Audio Converter (Start > All Programs > Fast Audio Converter).



2 SELECT THE WAV OPTION

Click the orange Settings button in Fast Audio Converter, and select Encoding from the list that appears. You'll then see the 'Default output format' pop-up menu, from which you should select the WAV option.



3 CONVERT THE FILE

Click the green Start conversion icon to convert the WMA file to WAV format. You'll now find that the quality will be high (thanks to Analog Recorder) and in the right format for use as a sample on a keyboard.

Expert tip

What is COSM?

COSM (Composite Object Sound Modelling) recreates the depth and character of the analogue sound in a way that an ordinary soundcard can't. COSM has been around for years, but Roland – the company that created the technology – has continually updated it. The EDIROL UA-700 is one of the best recording devices for computers.